

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (currently amended): An apparatus for monitoring layer depositions in a process chamber, comprising:

a light source;

a disk-shaped sensor element subjectable to deposition and growth of a deposition layer;

a light detector;

said sensor element having a first surface on one side of said sensor element, a second surface on an opposite side of said sensor element, and a region extending from said first surface to said second surface, said region being configured for light to pass through and to absorb light to a significantly lesser extent than a remaining part of said sensor element, ~~wherein~~ an intensity of the light ~~is~~ being measured in dependence on ~~the~~ said region being grown over by a thickness of the deposition layer.

Claim 2 (original): The apparatus according to claim 1,
wherein said region is a continuous opening formed in said
sensor element.

Claim 3 (currently amended): The apparatus according to claim
1, wherein said region is configured to influence the
intensity of ~~the~~ a light beam measured by ~~the~~ said detector as
the thickness of the layer grows on said sensor element.

Claim 4 (original): The apparatus according to claim 1,
wherein said detector is disposed outside the process chamber
and the intensity of the light from said light source is
measured through a window formed in the process chamber.

Claim 5 (original): The apparatus according to claim 1,
wherein said light source is a separate light source
generating a light beam.

Claim 6 (original): The apparatus according to claim 5,
wherein said light source is disposed in front of a window
formed in process chamber in a line with said sensor element
and said detector.

Claim 7 (original): The apparatus according to claim 1, wherein said light source is a plasma luminous phenomenon in the process chamber.

Claim 8 (original): The apparatus according to claim 1, which further comprises a tilting/rotating mechanism enabling said sensor element to be tilted/rotated out of a beam path of the light.

Claim 9 (original): The apparatus according to claim 8, wherein said mechanism is enabled to tilt/rotate said sensor element out of a light path from a plasma luminous phenomenon defining said light source to said detector.

Claim 10 (original): The apparatus according to claim 5, which further comprises a tilting/rotating mechanism enabling said sensor element to be tilted/rotated out of a beam path of said light beam from said light source to said detector.

Claim 11 (original): The apparatus according to claim 1, which comprises further detector for measuring the intensity of the light from said light source not influenced by said sensor element.

Claim 12 (original): The apparatus according to claim 1, wherein said region is formed with a spatial extent in a same order of magnitude as a maximum layer thickness to be determined with the apparatus.

Claim 13 (original): The apparatus according to claim 2, wherein said opening is formed with a spatial extent in a same order of magnitude as a maximum layer thickness to be determined with the apparatus.

Claim 14 (currently amended): The apparatus according to claim 1, wherein ~~said sensor element is a disk type sensor with a first surface and a second surface, said region extends from said first surface to said second surface, and~~ a diameter of said region varies.

Claim 15 (original): The apparatus according to claim 2, wherein said sensor element is a disk-type sensor with a first and a second surface, said opening extends from said first surface to said second surface and a diameter of said opening varies.

Claim 16 (original): The apparatus according to claim 1, wherein said sensor element is provided with a cooling device.

Claim 17 (original): The apparatus according to claim 1, wherein said sensor element is provided with a heating device.

Claim 18 (original): The apparatus according to claim 1, wherein said sensor element is one of at least two sensor elements and said light detector is one of at least two light detectors respectively associated with said sensor elements and configured to generate a measurement signal representing the intensity of the light transmitted by said sensors, and wherein an evaluation device is connected to said sensor elements for processing the measurement signals in dependence on one another.

Claim 19 (original): In combination with a process chamber for depositing or removing layers, the apparatus according to claim 1 adapted and disposed to monitor a growth or a removal of the layers in the process chamber.

Claim 20 (original): A monitoring method, which comprises providing an apparatus according to claim 1, monitoring a layer deposition in a process chamber with the apparatus, determining a cleaning cycle time of the process chamber from an intensity measurement of the light by comparing the measured light intensity with one of a predetermined minimum intensity and a predetermined maximum intensity.